RECOGTEK

Product Brief

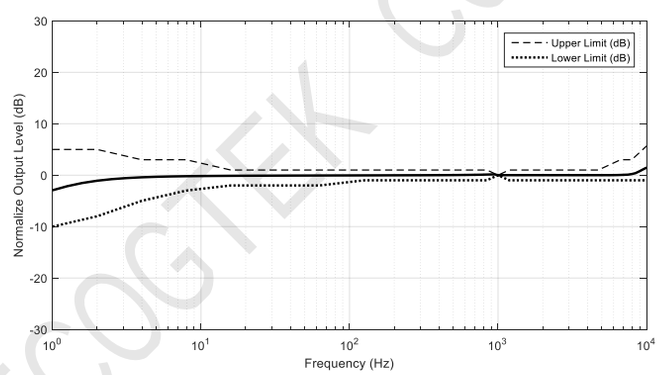
RA2718E

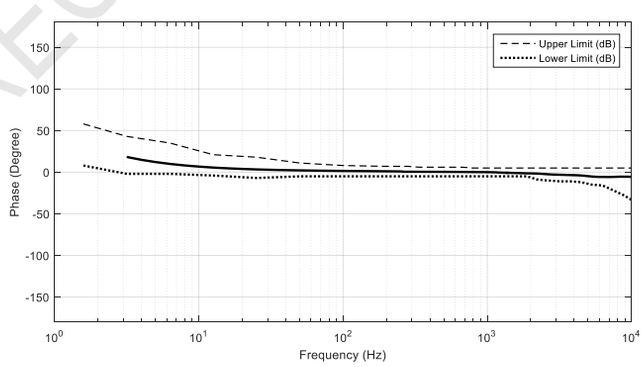
COMPACT ANALOG BOTTOM PORT MICROPHONE

PRODUCT DESCRIPTION

The RA2718E is bottom port silicon analog microphone, which features matched sensitivity, low power, and wide supply voltage. It would provide high signal-to-noise ratio, low noise floor.

The RA2718E performs widely flatness frequency response during 20Hz to 8KHz, which is suitable for tightened phase-matching requirement application in active noise cancellation (ANC), the environmental noise cancellation (ENC) or the acoustic echo cancellation (AEC).





PRODUCT FEATURES

- ✓ Flat Frequency Response
  - Low Frequency cut-off: <10Hz
  - High Frequency Flatness: 10KHz
- ✓ Sensitivity of -40 ± 1 dBV/Pa
- ✓ High SNR of 62 dBV/Pa
- ✓ 126 dB SPL Acoustic Overload Point
- ✓ 2.75 x 1.85 x 0.95 mm Surface-Mount Package with Bottom Port

PRODUCT BENEFITS

- ✓ High Flatness：20Hz(@-1dB) to 8KHz(@+1dB)
- ✓ +/-1dB uniformity to ensure product performance stability
- ✓ 3 passes IR reflow at 260°C
- ✓ Test# according to AEC-Q100-REV-G

TYPICAL APPLICATIONS

- ✓ Smartphone, earphone, speaker phone
- ✓ Wearable Intelligent Equipment
- ✓ True Wireless Stereo
- ✓ Smart Speaker, Conferencing Phone
- ✓ ANC/ENC Headsets

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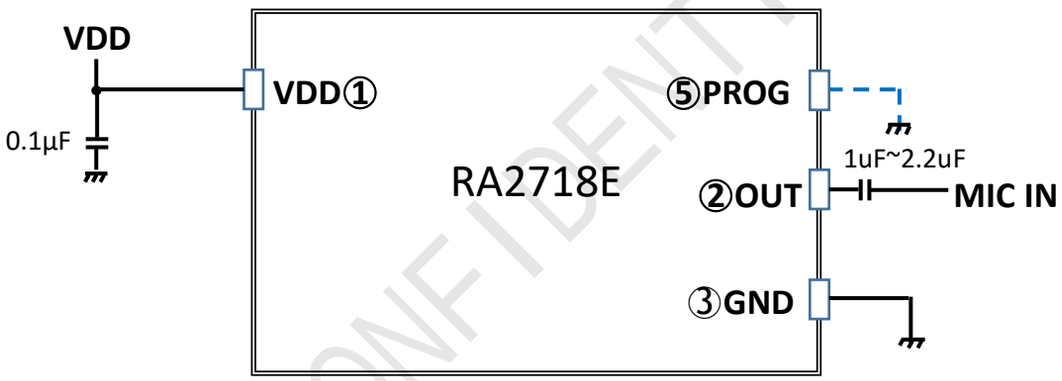
2022/7/11

Acoustic Characteristics

Test Conditions: T_A = 25±2°C, 55%±20% R.H., V_{DD} = 2.5V, no load, unless otherwise indicated

Parameter	Symbol	Values			Units	Notes
		Min	Typ.	Max		
Supply Voltage	V_{DD}	1.6	2.8	3.6	V	
Supply Current	I_{DD}		130		μA	
Sensitivity	SEN		-40		dBV/Pa	94dB SPL @1kHz, +/-0.5dB variation
Signal to Noise Ratio	SNR		62		dBV/Pa	94dB SPL @ 1kHz, A-weighted
Total Harmonic Distortion	THD		0.12		%	Measuring 2nd to 5th harmonic @1kHz
Acoustic Overload Point	AOP		126		dB SPL	THD = 10%, all operating modes
Low Freq. Cutoff Point	LFRO		10		Hz	-3dB relative to 1kHz
High Freq. Flatness	HFF		10		kHz	+3dB relative to 1kHz

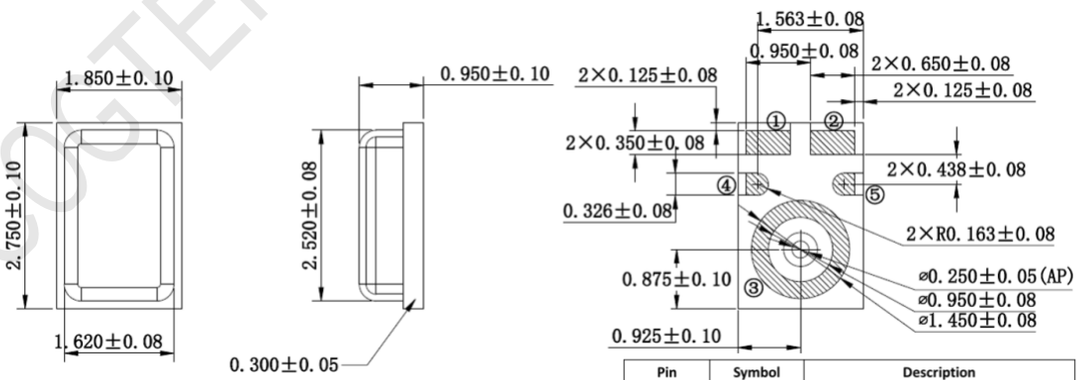
Typical Application



Note： 1. NC pin could be connected to GND or NC depends on SMT convenience.

2. PROM pin has internal pull-down resistor, which is either connected GND or NC.

PACKAGE INFORMATION



Pin	Symbol	Description
1	VDD	Power Supply
2	OUT	Analog Output Signal
3	GND	Ground
4	NC	No Connect
5	PROG	One Time Program for Gain Adjust

PLEASE NOTE!

The product brief is for information purposes of quickly understanding the key features, benefits. We kindly ask customers to refer to the relevant product datasheets provided by sales or marketing representatives. Our customers and their technical departments are required to evaluate the suitability of our products for the intended application.

RECOGTEK Technologies reserves the right to change the document and/or the information given herein at any time.

WARNINGS

Excepts as otherwise explicitly approved written document signed by authorized representatives of RECOGTEK Technologies, our products may not be used in any life-endangering applications, including but not limited to nuclear, military, life-critical or any other applications where a failure of the product or any consequences of the use thereof can result in personal injury.

2022/7/11